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**Communications**

**RADIO FREQUENCY MANAGEMENT**



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This instruction implements the policy and procedures established in AFI 33-118, Radio Frequency Spectrum Management (formerly AFR 700-14), and AFM 33-120, Radio Frequency (RF) Spectrum Manager. This instruction gives the procedures for managing radio frequencies at Charleston Air Force Base, SC. It applies to all organizations, including tenant units and contractors, who use Air Force frequencies at this base. It includes, but is not limited to, the following uses: ground radio and radar stations (fixed or portable); mobile radio communications equipment; marine vessels with mobile radio communications equipment; airborne devices such as guided missiles; instrument balloons; pilotless aircraft; airborne radio communications; and any other devices that emit electromagnetic radiation into free space.

**SUMMARY OF REVISIONS**

This revision changes paragraph numbering to conform with current directives.

**1. Background.** The demands of the Air Force and civilian contractors for frequencies on an Air Force base are far above the frequencies that are available for us. As a result, frequencies must often be shared with other users. Potential users may be denied the use of some frequencies due to saturation of existing allocations.

**2. Responsibilities:**

**2.1. The Wing Commander:**

2.1.1. Is responsible for all electromagnetic radiation emanating from CAFB and activities hosted by CAFB, such as North Field.

2.1.2. Will have the base C4 Systems Officer appoint a staff member from the 437th Communications Squadron to be the Installation Frequency Manager (IFM).

2.2. The Installation Frequency Manager will:

- 2.2.1. Be the single point of contact for all frequency matters on CAFB.
- 2.2.2. Ensure the unit points of contact understand the parameters of their frequency assignments.
- 2.2.3. Maintain the Radio Frequency Authorization (RFA) listing for all CAFB and tenant units.
- 2.2.4. Resolve interference problems at the local level if possible.
- 2.2.5. Assist users with frequency actions and requirements.

2.3. Users will:

- 2.3.1. Ensure that all equipment complies with the authorized limitations and tolerances of the RFA.
- 2.3.2. Ensure that current Air Force directives concerning frequency management are available and complied with (AFI 33-118, Radio Frequency Spectrum Management, and AFI 10-707, Spectrum Interference Resolution Program.)
- 2.3.3. Resolve any deficiencies causing interference.
- 2.3.4. Notify the IFM when frequency use is no longer required.
- 2.3.5. Request and use only the minimum power output and antenna gain necessary to accomplish the mission.
- 2.3.6. Use radiation suppression devices, such as dummy loads, whenever possible, for tuning, testing or repairing transmitter equipment.
- 2.3.7. Provide an appointment letter to the IFM, identifying the unit's point of contact and alternate for frequency matters.
- 2.3.8. Coordinate all frequency actions with the IFM.

**3. Radio Frequency Proposals, Modifications and Deletions:**

3.1. All frequency requests will be submitted to higher headquarters in the Standard Frequency Action Format by the IFM.

3.1.1. Requests for new frequency assignments:

- 3.1.1.1. Customers will initiate frequency requests on AF Form 3215 and submit the request to the 437 CS Customer Service office. Requests must provide a clear and accurate description of the requirement.
- 3.1.1.2. Processing times for new frequency requests is approximately 180 days. Sufficient lead time should be considered since there is no "priority" in the approval process.
- 3.1.1.3. Requests will be submitted to HQ AMC.

3.1.2. Temporary Frequency Requests:

- 3.1.2.1. Minimum lead time for requests follows: CONUS-90 days, Overseas-120 days.
- 3.1.2.2. Requests will be submitted to the Tanker Airlift Control Center (TACC).

3.1.3. Frequency assignment deletion will be submitted by IFM when requirements no longer exist.

3.1.4. Frequency modifications will be submitted by IFM whenever equipment configuration has changed; i.e., when antennas are moved, equipment is added, removed, changed or modified, or a 5-year review is due.

#### **4. General Rules Governing Radio Transmission on CAFB:**

4.1. Transmission within the confines of CAFB on any frequency, excluding citizen band (CB) and MARS frequencies, requires the user to have a valid Radio Frequency Assignment or license to operate on that frequency. A copy of this authorization must be on file with the IFM (to include tenant units).

4.2. Transmission on MARS frequencies must be coordinated with the IFM.

4.3. Coordination with the IFM is required prior to purchasing, acquiring, developing, or installing any Communication and Electronic equipment that radiates electromagnetic energy.

#### **5. Spectrum Interference Resolution (formerly MIJI):**

5.1. The Spectrum Interference Resolution program is explained in AFI 10-707.

5.1.1. Meaconing: The DELIBERATE transmission of actual or simulated radio navigation signals for the purpose of confusing navigation.

5.1.2. Intrusion: The INTENTIONAL insertion of electromagnetic energy into transmission paths in any manner, with the object of deceiving operators or causing confusion.

5.1.3. Jamming: The DELIBERATE radiation of electromagnetic energy with the object of impairing or disrupting the use of radio.

5.1.4. Interference: The UNINTENTIONAL insertion of electromagnetic energy which causes unintentional degradation of radio systems.

5.2. Users experiencing interference should prepare a report containing the following information:

5.2.1. Affected frequency/Net name.

5.2.2. Description of the interference (data noise, voice, heavy static, etc.).

5.2.3. Effects on mission (reduced range, false targets, reduced intelligibility, etc.).

5.2.4. Dates and times of interference (weather if possible).

5.2.5. List of other units experiencing problems (if available)

5.2.6. Name and phone number of point of contact.

5.3. Installation Frequency Manager will:

5.3.1. Compile all available data on interference problems from users.

5.3.2. Attempt to resolve interference locally.

5.3.3. Prepare EMI report according to format in AFI 10-707 para 2.7.

5.3.4. Report will be submitted via message to HQ AMC and other applicable agencies

5.4. Due to the peculiarities of radio wave transmission, some atmospheric conditions will “cause” interference (low cloud cover). This type of interference is sporadic and should be tolerated if it does not cause excessive degradation to communications.

LARRY A. TURNER, Colonel, USAF  
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